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A.D. 1867, *17th JULY.* N<sup>o</sup> 2099.

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S P E C I F I C A T I O N

OF

SAMUEL CUNLIFFE LISTER.

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CONSUMING SMOKE, &c.

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LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY:

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

1868.







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A.D. 1867, 17th JULY. N° 2099.

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Consuming Smoke, &c.

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*(This Invention received Provisional Protection only.)*

PROVISIONAL SPECIFICATION left by Samuel Cunliffe Lister at the Office of the Commissioners of Patents, with his Petition, on the 17th July 1867.

I, SAMUEL CUNLIFFE LISTER, of Manningham Hall, Bradford, Yorkshire, do  
5 hereby declare the nature of the said Invention for "CONSUMING SMOKE,  
ECONOMISING FUEL, AND GENERATING STEAM," to be as follows:—

At the present time steam is extensively and successfully used for the prevention and consumption of smoke; as now used the steam is admitted at the furnace door in front of the fire.

10 Now my first improvement consists in admitting the steam or steam and air at the bridge, and in order to mix it properly with the gases in the furnace I prefer to blow the steam and air through a number of tubes (pierced with holes) in the flue.

Secondly, in forcing a current of air or air and steam through hollow grate  
15 bars pierced with holes at intervals so as to blow the fire with air or air and steam combined; I am aware that hollow grate bars have been used through which air has passed by its own free action; but my improvement consists in forcing it through with a fan or other means. These arrangements are particularly applicable to steam boiler furnaces, a great economy of fuel results,  
20 and the smoke is consumed.

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Printers to the Queen's most Excellent Majesty. 1868.

